TOWN OF INDIAN RIVER SHORES
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The following are general guidelines for the Installation of generators in The Town of Indian River Shores

Generators that are exposed to wind shall be designed and installed to resist the wind pressures on the equipment and the supports as determined in accordance with the Florida Building Code, Building. This may be accomplished by design or by application of Section 301.13.1.

Generators shall be installed as required by the terms of their approval, in accordance with the conditions of the listing, the manufacturer's installation instructions and this code. Manufacturer's installation instructions shall be available on the job site at the time of inspection.

Where conflicts between this code and the conditions of listing or the manufacturer's installation instructions occur, the provisions of this code shall apply.

Exception: Where a code provision is less restrictive than the conditions of the listing of generator or the manufacturer's installation instructions, the conditions of the listing and the manufacturer's installation instructions shall apply.

Generators installed at grade level shall be supported on a level minimum 3½ inch (89 mm) concrete slab or other approved material extending a minimum of 2 inches (57 mm) above adjoining finished grade. (The bottom of the equipment shall meet elevation requirements of the Flood Control Ordinance of Indian River County.)

Clearances around generators to elements of permanent construction, including other installed equipment and appliances, shall be sufficient to allow inspections, service, repair or replacement without removing such elements of permanent construction or disabling the function of a required fire resistance-rated assembly.

Generators shall not be installed in a location where subject to physical damage unless protected by approved barriers meeting the requirements of the Florida Fire Prevention Code.

RESIDENTIAL GENERATOR PERMITTING REQUIREMENTS AND GENERAL REQUIREMENTS

The Town of Indian River Shores is in;

Wind zone---130 miles per Hour
Exposure---C

Required permits slab + electrical + gas permit

Generators that are exposed to wind shall be designed and installed to resist the wind pressures on the equipment and the supports as determined in accordance with the Florida Building Code, Building. This may be accomplished by design or by application of section 301.13.1 of the Florida Building Code, Mechanical.

☐ LP Gas* ☐ Natural Gas ☐ Diesel ☐ Gasoline

*A separate fuel gas permit is required for natural or LP gas.

☐ Aboveground fuel storage ☐ Belowground fuel storage

LP tanks must be installed per NFPA 58.
Underground tanks must be a minimum of 10' from: [a] Property lines [b] Any source of ignition [c] Any opening in a structure. (See figure I-3)

Aboveground storage tank setbacks are between 10' and 25'. (See figure I-2)

Size of tank: _____gallons

Liquid fuel tanks, other than LP, must be installed in accordance with Chapter 62-762 and 763 of the Florida Administrative Code and NFPA-30. This requires permitting through the County Health Department for any tank greater than 550 gallons above ground and any tank, other than LP, below ground (Florida DEP permit). These tanks must be set back from potable wells at least 50 feet clear. Clearance requirements also apply to tanks of any size mounted on a generator.

☐ UL 1008 transfer switch
☐ UL 67 transfer switch
☐ Double throw break before make transfer switch
☐ Load calculation for generator provided

RESIDENTIAL GENERATOR PERMITTING REQUIREMENTS AND GENERAL REQUIREMENTS

Please provide the following for review:

1. A plot plan based on a survey with dimensions and flood zone information Showing:

GENERATOR ELEVATION:

The bottom of the generator must be ½ foot above the required Base flood elevation.

Fuel tank. Note location and size of tank on survey.

House and other property improvement.

Per NFPA 37, engines and their weather proof housing must be 5 feet from building openings* and combustible walls. Manufacturers usually require a 5-foot overhead clearance as well. Generators must maintain a 5-foot clearance from air conditioning condenser units.
*PER NFPA-Building openings include soffit vents, doors, windows, and ventilation openings, such as for ventilation system exhaust and intakes.

Clearances around generators to elements of permanent construction, including other installed equipment and appliances shall be sufficient to allow inspections, service repair, or replacement without removing such elements of permanent construction or disabling the function of a required fire rated assembly.

Property lines, easements, septic systems

Physical Damage - Generators shall not be installed in a location where subject to physical damage unless protected by approved barriers meeting the requirements of the Florida Fire Prevention Code.

Noise - Generators must comply with the Noise Abatement Ordinances of the jurisdiction, in Indian River County limited to 65 decibels, continuous operation at the property line. Other limitations may apply depending on the unit.
Potable Water wells - must not be located within 100 feet of a fuel tank location. Exemption: LP tanks

2. One copy of:
   a. **Manufacturer's specifications** of generator and fuel tank. Exemption: LP Tanks.
   b. **Installation requirements** of generator and all fuel tanks.

All underground tanks are assumed to require anchoring provisions to prevent flotation. Either manufacturers standard details or design professional prepared details must be provided to meet the requirement. Certification from the installer that the installation is in accordance with this provision must be provided at inspection.
County: Per FEMA guidelines for VE Zone - no buried LP Tanks. Generators & Tanks must be on pilings or cantilevered from the main structure. Details & certifications must be submitted prior to permit (see p-6 for further details)

This information will be reviewed by County or City Planning Divisions, Engineering, possibly Environmental Health, and the Building Department.

Generators shall be installed as required by the terms of their approval, in accordance with the conditions of the listing, the manufacturer's installation instructions and prevailing Building Codes. Manufacturers installation instructions shall be available on the job site at the time of inspection.

Where conflicts between the codes and the conditions of listing or the manufacturers installation instructions occur, the provisions of the codes shall apply.

Exception: Where a code provision is less restrictive than the conditions of the listing of the generator, or the manufacturer's installation instructions, the conditions of the listing and the manufacturer's installation instructions shall apply.

The following sample generator installation checklist is for informational purposes only. The following checklist is intended as a guideline and in no way implies an approved inspection.

Generator installation checklist.

- 2005 National Electrical Code* - See Articles 445 for generators, 701 for legally required systems, and 702 optional standby systems.
- Florida Building Code – Mechanical, section-915
- NFPA-37
- 2004 Florida Residential Building Code with 2005 and 2006 revisions.** [www.floridabuilding.org]

1. Permits and documents.

    a. Obtain required permits. Check for Notice of Commencement. Post permit and manufacturers installation instructions with the reviewed plot plan and all other documents needed for installation and inspections.
    b. Verify location of generator per the plot plan before connecting generator.

2. Transfer switch installed ahead of main.

    a. Contact utility services to disconnect the service to complete work ahead of main.
    b. Obtain a service change affidavit from the Building Department to have the electric reconnected (must be done by licensed electrician).

c. An automatic transfer switch must be UL listed for that use and approved by the utilities. Must be UL 1008 or UL 62 as needed.
d. The transfer switch must be labeled "For use as service equipment".
e. Any grounding electrodes connected to the existing main must be re-routed to or ahead of the transfer switch per *250-24 and *250-30.
f. Bond all grounding electrodes together per *250-30.
g. Verify the available short circuit current meets or exceeds rating of main service equipment.

All Transfer Switches:

3. Check for code compliance and safety of the existing electrical system on the line or load side of transfer switch prior to any work being done. Do not install any new electrical equipment to a non-conforming electrical system. Correct any existing discrepancies. Do not hesitate to contact the Building Department with any concerns of existing discrepancies. [**2004 Florida Building Code for Existing Buildings]
4. Use a double throw break before make type transfer switch.
5. Provide several areas to inspect for proper burial depth of any buried conductors or raceways per *300-5. Provide barriers for protection of any holes or trenches left uncovered for inspections.
6. Provide clean fill for backfill of trenches. Rocks or any material that may damage conductors or raceways shall not be used for fill. Compact backfill properly. *300-5
7. For direct burial conductors use only wires listed for that use.
8. Provide the proper over current protection for conductors and equipment per article *240 and *310-16.
9. Post signage at the service location noting type and location of the standby power system. *702.8
10. No illegal/unsafe connections are allowed such as back feeding into a dryer receptacle or air conditioner disconnect.
11. Make arrangements to meet the inspector on site for the final inspection. The generator/standby power must be operational at time of the inspection.
12. For an optional system where the generator is not large enough to power all circuits in the panel board fed from the standby generator, label all breakers to be used on standby power. It's recommended to get in writing from the owner a list of all circuits, which need to be powered.

VE ZONE GENERATORS & LP TANKS

1. All new construction of GENERATOR EQUIPMENT PADS in Zone VE must be elevated on pilings and columns or cantilevered out from the structure so that:

   a. The bottom of the lowest horizontal structural member of the generator equipment pad (excluding the pilings and columns) is elevated to 0.5 feet or more above the base flood level, and; [930.07(2)(c)4.a.]

   b. The pile or column foundation and structure attached thereto must be anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent chance of being equal or exceeded in any given year (100-year mean recurrence interval). [930.07(2)(c)4.b.]

   c. The generator equipment pad should be located on the building's landward side to protect against velocity flows and debris impact. [930.07(2)(a)3.c]

   d. Provide construction details showing how the generator equipment pad will be fastened against flotation. [930.07(2)(c)4.b.]

2. All new construction of PROPANE STORAGE TANKS in Zone VE must be elevated on pilings and columns so that:

   a. The bottom of the lowest horizontal structural member of the propane storage tank (excluding the pilings and columns) is elevated to 0.5 feet or more above the base flood level, and; [930.07(2)(c)4.a.]

   b. The pile or column foundation and structure attached thereto must be anchored to resist flotation, collapse, and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent chance of being equal or exceeded in any given year (100-year mean recurrence interval). [930.07(2)(c)4.b.]

   c. The propane storage tank should be located on the building's landward side to protect against velocity flows and debris impact. [930.07(2)(a)3.c]

   d. Provide construction details showing how the propane storage tank will be fastened against flotation. [930.07(2)(c)4.b.]

3. Provide construction details showing how the propane fuel supply pipes will connect to the generator and will be fastened against flotation. [930.07(2)(a)3.d.]

4. All power equipment handling equipment, distribution panels, switches, circuit breakers and exterior wall penetrations must be
elevated to 0.5 feet or more above the 11.0 feet base flood elevation to prevent water from entering or accumulating within the components during conditions of flooding. [930.07(2)(a)3.d.]

5. Provide a certification from a professional engineer that the exterior gas storage tank is adequately anchored to prevent flotation, collapse or lateral movement during the base flood event. [930.07(2)(a)3.a]

6. Provide a certification from a professional engineer that the exterior generator equipment pad is adequately anchored to prevent flotation, collapse or lateral movement during the base flood event. [930.07(2)(a)3.a]

THE FOLLOWING APPLIES ONLY TO COMMERCIAL AND MULTI-FAMILY INSTALLATIONS

1. Must meet all residential generator-permitting requirements.

2. If generator location is not approved on existing site plans. An administrative approval will be required.

3. A complete wiring diagram will be required for review including conduit sizes and wire sizes. Load calculations will need to be determined.

4. Commercial generator slabs must be in accordance with manufacturer's requirements or as required by a design professional.

5. Must have Fire Department approval for all commercial generators and fuel tanks.

6. Must have Health Department sign off for any fuel tank greater than 550 gallons above ground and any tank other than LP below ground (Florida DEP permit). These tanks must be set back from potable wells at least 50 feet clear. Clearances also include tanks of any size mounted on a generator.